# KPDES FORM SDAA

# Kentucky Pollutant Discharge Elimination System (KPDES)

**Socioeconomic Demonstration and Alternatives Analysis**

The Antidegradation Implementation Procedure found in 401 KAR 10:030, Section 1(3)(b)3 requires KPDES permit applications for new or expanded discharges to waters categorized as "Exceptional or High Quality Waters" to conduct a socioeconomic demonstration and alternatives analysis to justify the necessity of lowering local water quality to accommodate important economic or social development in the area in which the water is located. This demonstration shall include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

## I. Project Information

**Facility Name: LEE COUNTY MINE NO. 1**

| **Location: PAWPAW CREEK RD AND KENTUCKY HIGHWAY 1411** | **County: LEE** |
|---|---|

**Receiving Waters Impacted: PAWPAW CREEK and DUNIGAN BRANCH**

## II. Socioeconomic Demonstration

**1. Define the boundaries of the affected community:**
(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

**The proposed mining operation is located in Lee County and lying on the Pawpaw Creek and Dunigan Branch watersheds. The site located at the intersection of Pawpaw Creek Road and Dunigan Branch Road and lies on the north side of Pawpaw Creek Road and on the east and west sides of Dunigan Branch Rd. The latitude/Longitude for the site is:**

**Lat: N 37°33'18"**
**Lon: W 83°39'17"**

**2. The effect on employment in the affected community:**
(Compare current unemployment rates in the affected community to current state and national unemployment rates. Discuss how the proposed project will positively or negatively impact those rates, including quantifying the number of jobs created and/or continued and the quality of those jobs.)

**The unemployment rate for Lee County, Ky. in the 2nd Quarter of 2009 has risen to 12.2% from 11.2% from the previous Quarter. This is up substantially from the last two Quarters of 2008 which were 7.3% and 7.6% respectively. Lee County is already included as one of the poorest counties within the state, per capita. Largely rural, residents depend on coal mining operations such as this to provide jobs, income, and additional tax base. There will be between five and ten good paying jobs provided by this operation that will be competitive in wages to other coal mining operations within the county of the same size.**

**(Source: www2.fdic.gov)**

## II. Socioeconomic Demonstration- continued

**3. The effect on median household income levels in the affected community:**

(Compare current median household income levels with projected median household income levels. Discuss how proposed project will positively or negatively impact the median household income in the affected community including the number of households expected to be impacted within the affected community.)

**The median family income for Lee County residents is $32,100, as compare to a state total $52,800, and a national total of $64,000 for the same. This proposed project will positively impact the community by providing competitive paying jobs to a community that is presently suffering from a 12.2% unemployment rate. The labor force within the community offers plenty qualified applicants who are desperately seeking employment, and this project will be one step in easing that strain for five to ten households within the affected community.**

**(Source: www2.fdic.gov)**

**4. The effect on tax revenues of the affected community:**

(Compare current tax revenues of the affected community with the projected increase in tax revenues generated by the proposed project. Discuss the positive and negative social and economic impacts on the affected community by the projected increase.)

**The current tax revenues of the affected community have dropped over the past year with the drop in property value nationally due to the recession. Forced to make cuts in order to continue providing necessary services, Lee County, like many other counties is operating on a shoestring budget. The additional taxes collected from the sale of the coal produced from this proposed project, the local taxes collected from the payroll of the employees who will be working on the proposed project, the additional revenue spent locally in business that will be supporting the proposed project, along with the additional household incomes that will be spent within the community will be a step in relieving this strain on the community at large.**

## II. Socioeconomic Demonstration- continued

**5. The effect on an existing environmental or public health in affected community:**
(Discuss how the proposed project will have a positive or negative impact on an existing environmental or public health.)

**The negative effect on the existing environmental and public health will be minimal to non-existent. Every effort is being made to insure that both the environment and public health will be protected. State and federal laws relating to the mining and reclamation of the site will be stringently followed. The project site as it is today has steep rocky slopes, which doesn't provide much in the way of pasture land or useful farming land. After mining and reclamation has been completed, the site will offer a much more productive grazing or farming opportunity for the owners which hasn't existed till now. The site, after reclamation, will also provide better watering, foraging, and breeding opportunities for wildlife as well.**

**6. Discuss any other economic or social benefit to the affected community:**
(Discuss any positive or negative impact on the economy of the affected community including direct and or indirect benefits that could occur as a result of the project. Discuss any positive or negative impact on the social benefits to the community including direct and indirect benefits that could occur as a result of the project.)

**There really is no negative social or economic impact to the community as a result of this project. The community itself has benefited for generations from the mining of coal. Most residents have a good understanding of what coal mining means to their community, and depend on it to continue their way of life. As stated above, in today's economy, it may be more important to them economically and socially than even one year ago. By bringing more local tax revenue, increasing the number of households within the community that have competitive paying jobs, this can only better the community as a whole.**

## III. Alternative Analysis

**1. Pollution prevention measures:**
(Discuss the pollution prevention measures evaluated including the feasibility of those measures and the cost. Measures to be addressed include but are not limited to changes in processes, source reductions or substitution with less toxic substances. Indicate which measures are to be implemented.)

**There are several pollution prevention measures which are to be used during this proposed project. The use of sediment control ponds and diversion ditches, approved for use by the state and federal government, to insure that no runoff leaves the site that has not been properly monitored and tested, to insure it is absolutely safe for the community and environment. No toxic materials are to be used on the site, so there won't be any impact from that. Mining and reclamation will follow the requirements as determined by the State of Kentucky to be the best management practices to limit any negative impacts from this proposed coal mining operation.**

**2. The use of best management practices to minimize impacts:**
(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

**All runoff of water will be controlled by the use of diversion ditches and sediment ponds. No water will be permitted to leave site that has not been through these approved control devices. They will be monitored, and the water tested, on a regular basis to insure they meet all requirements and specifications.**

**3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:**
(Discuss the potential recycle or reuse opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

**No wastewater, waste by-products, or production materials and fluids, are to be disposed of on the proposed site. None of theses items have been found to be on this site presently, and any waste by products, wastewater, or production materials and fluids that do make it on to the site in normal operations will be properly controlled and disposed of as required. There will be no dumping of any of these materials on the site.**

## III. Alternative Analysis - continued

**4. Application of water conservation methods:**
(Discuss the potential water conservation opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

**There are no plans for using water in the process of mining the coal. All coal will be removed from the site and processed at existing coal prep plants. Insuring that all runoff is properly controlled and discharged only after it has been given time to allow all sediments to settle in the sediment ponds, along with regular inspections and testing, is our preservation/conservation plan.**

**5 Alternative or enhanced treatment technology:**
(Compare feasibility and costs of proposed treatment with the feasibility and costs of alternative or enhanced treatment technologies that may result in more complete pollutant removal. Describe each candidate technology including the efficiency and reliability in pollutant removal and the capital and operational costs to implement those candidate technologies. Justify the selection of the proposed treatment technology.)

The applicant will utilize Best Management Practices to reduce sediment impacts on aquatic resources. The BMP's to be utilized include the following:

***Soil Stabilization Practices***

- **Natural vegetation adjacent to streams will be maintained to ensure a stable stream bank.**
- **Establishment of a protective vegetative cover by the prompt reseeding of disturbed areas.**
- **Utilizing mulches when reseeding disturbed areas.**
- **Grading and shaping of backfilled areas to reduce erosion and sediment production.**
- **Placement of rock rip-rap, where necessary, to reduce erosion and sediment production.**

***Perimeter Structural Practices***

- **Placement of silt fences, where necessary and practicable, to reduce erosion and sediment production.**
- **Placement of straw bale barriers, where necessary, to reduce erosion and sediment production**

***Storm Water Management Devices***

- **Construction of sediment basins to protect water quality.**
- **Construction of diversion ditches, where necessary, to manage and divert runoff.**
- **Work near or in stream channels will be performed during no/low flow or dry weather periods.**

**COST ANALYSIS**

**Soil Stabilization practices:**

1. No additional cost for maintaining natural vegetation.

2. Prompt reseeding estimate 20 percent additional cost. Seeding required anyway but this provision will require additional effort and multiple seedings. Cost calculations: 300 dollars per acre x 222.15 x 20 % = 13,329 dollars.

3. Mulching estimated 20 percent additional cost. Mulching required anyway but this provision will require additional effort and multiple mulchings. Cost calculations: 100 dollars per acre x 222.15 x 20 % = 4,443 dollars.

4. Grading and Shaping: No additional cost required by SMCRA permit.

5. RIP-RAP estimate 50 additional tons required for enhanced BMP. Insignificant cost to place rip-rap, will be done in conjunction with grading. Cost calculations 50 tons x 9.50 = 475 dollars.

**Perimeter Structural Practices:**

1. Silt fences. Estimated 2000 linear feet required. One stake per four foot = 500 stakes. Cost calculation 6 dollars per foot x 2000 feet + 80 cents per stake= 12,400 dollars.

2. Straw Bales. 2000 linear feet divided by 3 foot per bale = 670 bales. Cost calculations 3.50 dollars per bale x 670 = 2,345 dollars.

3. Note: The most expensive option will be used for the total, though the permittee may opt for either at his discretion.

**Storm Water Management Devices:**

1. No additional cost for construction of Sediment Basins.

2. No additional cost for construction of Diversion Ditches.

3. No additional cost for no/low or dry flow periods.

**Total Cost:**

| | |
|---|---|
| Seeding: | $13,329.00 |
| Mulching | $4,443.00 |
| Rip-Rap | $475.00 |
| Silt Fence | $12,400.00 |
| | **$30,647.00** |

Enhanced Best Management Practices (BMP) will be used as specified in the application because, though the Permit is not within one (1) mile of exceptional water but it is within 1.5 miles of the South Fork of the Kentucky River.

## III. Alternative Analysis - continued

**6. Improved operation and maintenance of existing treatment systems:**
(Discuss improvements in the operation and maintenance of any available existing treatment system that could accept the wastewater. Compare the feasibility and costs of improving an existing system with the feasibility and cost of the proposed treatment system.)

**All sediment ponds and diversion ditches will be installed prior to any mining in an area to insure that no runoff containing pollutants can leave the site. All sediment ponds and diversion ditches have been approved by the state, and no deviation from those approved plans will be made without prior notice and approval by the state.**

**7. Seasonal or controlled discharge options:**
(Discuss the potential of retaining generated wastewaters for controlled releases under optimal conditions, i.e. during periods when the receiving water has greater assimilative capacity. Compare the feasibility and cost of such a management technique with the feasibility and cost of the proposed treatment system.)

**The sediment ponds and diversion ditches approved for this proposed project were designed to accommodate a rain event much larger than any normal seasonal rain event would require. All sediment ponds and diversion ditches have been approved by the state, and no deviation from those approved plans will be made without prior notice and approval by the state.**

## III. Alternative Analysis - continued

**8 Land application or infiltration or disposal via an Underground Injection Control Well**

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of .proposed treatment system.)

**There are no plans to use either of these in the proposed mining project.**

**9 Discharge to other treatment systems**

(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

**There are no other treatment systems, public or private, other than those as described in Section 3 are to be used on this site.**

**IV Certification:** I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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|---|---|---|---|
| **Name and Title:** | **David Altizer, Managing Member** | **Telephone No.:** | (606)864-6648 |
| **Signature:** | DA G | **Date:** | **3-4-2010** |

# Kentucky Pollutant Discharge Elimination System (KPDES)
# Instructions
# KPDES Permit Application Supplemental Information

**SECTION I – PROJECT INFORMATION**

**Facility Name**: Provide the name of the facility
**Location:** Provide the physical location of the proposed project
**County:** Indicate the county in which the facility is located
**Receiving Water Name:** Indicate the water body into which the facility discharges or plans to discharge.

**SECTION II – Socioeconomic Demonstration**

For each factor provide a discussion of expected positive and negative impacts. Include appropriate support documentation.

**SECTION III – Alternative Analysis**

For each alternative compare the feasibility and costs of the alternative to the feasibility and costs of the proposed project and its treatment system. Include appropriate support documentation.

**SECTION IV - CERTIFICATION**

**Name and Title:** Indicate the name and title of the person signing the form.
**Telephone No.:** Provide the telephone number of the person signing the form.
**Date:** Indicate the date which the form was signed.

This form being part of the permit application must be signed as follows:

**Corporation:** by a principal executive officer of at least the level of vice president
**Partnership or sole proprietorship:** by a general partner or the proprietor respectively